

Aviation Accident Review



FY04

Department of the Interior Aviation Accident Review

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Ground Rules





The National Transportation Safety Board

NTSB 831.13 Flow and dissemination of accident or incident information.

(b) ... Parties to the investigation <u>may relay</u> to their respective organizations information necessary for purposes of prevention or remedial action.

... However, <u>no (release of) information... without prior consultation</u> and <u>approval</u> of the NTSB.

This information is provided for accident prevention purposes only



Aviation Accident Review











East Highlands, CA October 3, 2003

Lockheed P2V

Mission

Point-to-point

Damage

Destroyed

Injuries

2 Fatal

Procurement

Exclusive Use

NTSB I D

LAX04FA002





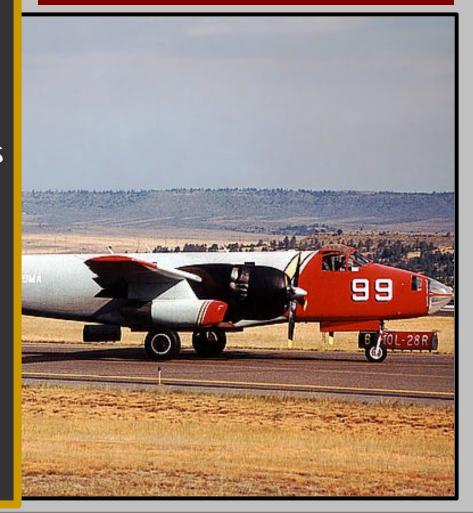
East Highlands, CA October 3, 2003

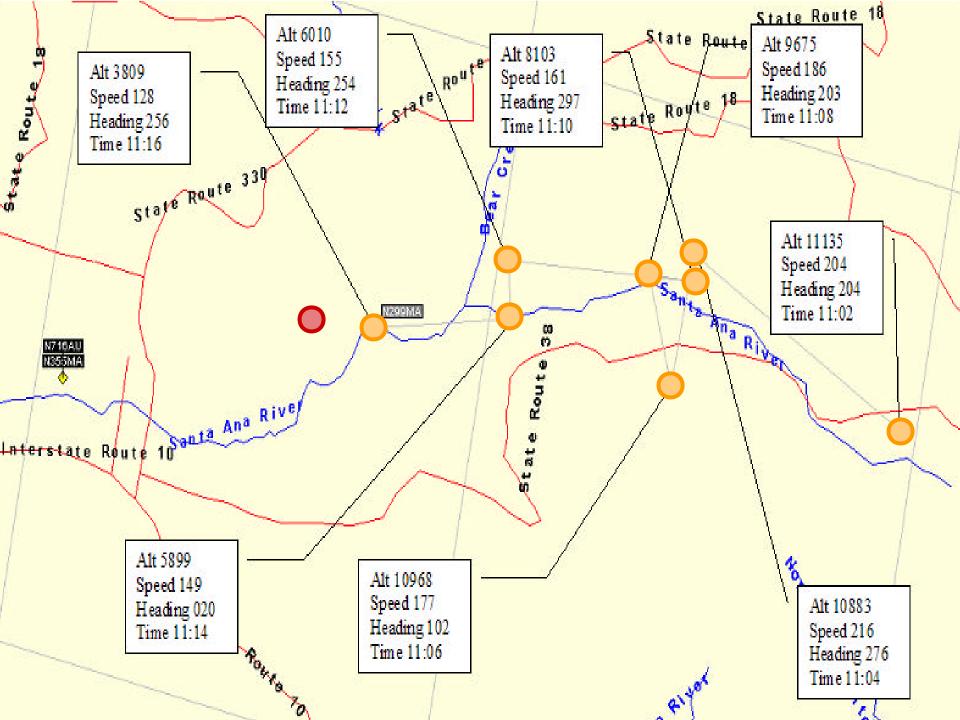
The P2V was observed flying up the Santa Ana Canyon from the southwest to the northeast. The aircraft made a 180° left turn, and descended into the clouds on a southwesterly heading towards the San Bernardino Airport / Air Tanker Base.

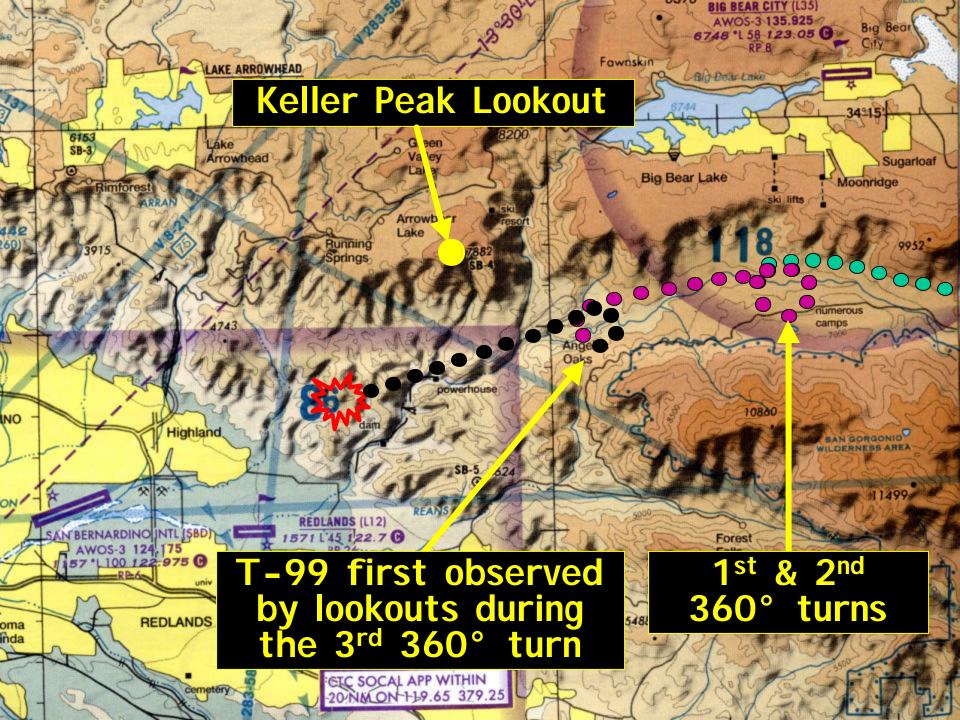
Moments after entering the clouds the witnesses observed a "rapidly rising dome" in the cloud deck.

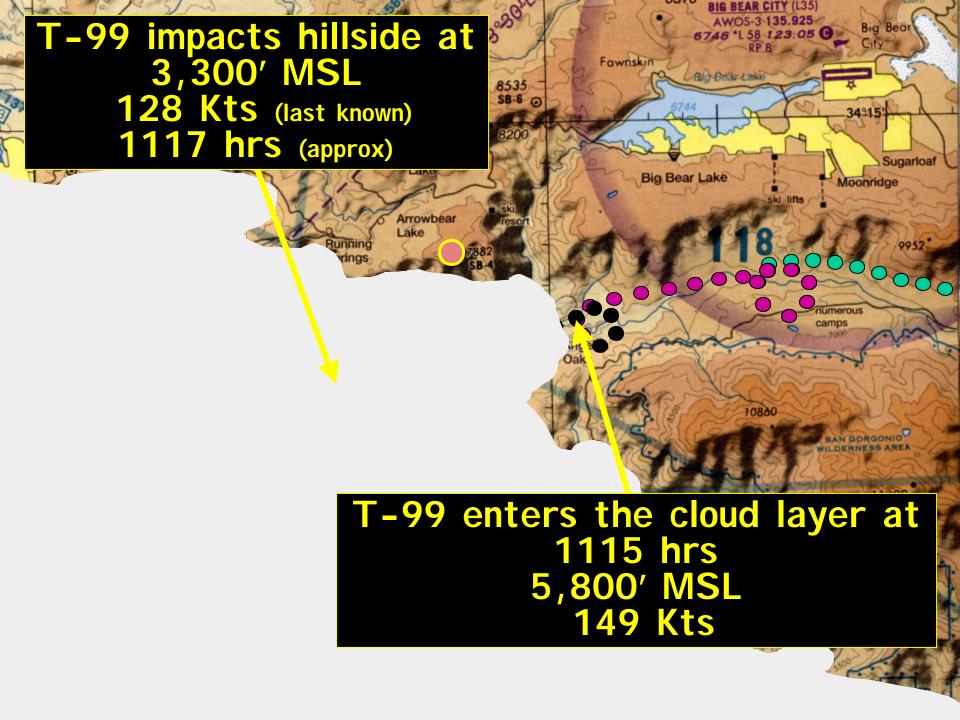
The aircraft was destroyed when it impacted terrain.

NTSB Investigation On-Going Preliminary Information













OAS Observations East Highlands CA, October 3, 2003

Risk Management strengths



ssue

- Automated Flight Following provided critical data for recreating the flight profile...
 - ... Airspeed
 - ... Altitude
 - ... Ground track



OAS Observations East Highlands CA, October 3, 2003

Risk Management weaknesses



ssues

- Weather briefing
- Flight plans
- Alternates and options
- Proficiency (instruments...)
- Risk tolerance for flight in marginal visibility
- Decision framing



Fredonia, AZ October 16, 2003

MD 900 Explorer

Mission

Fire Recon

Damage

Substantial

Injuries

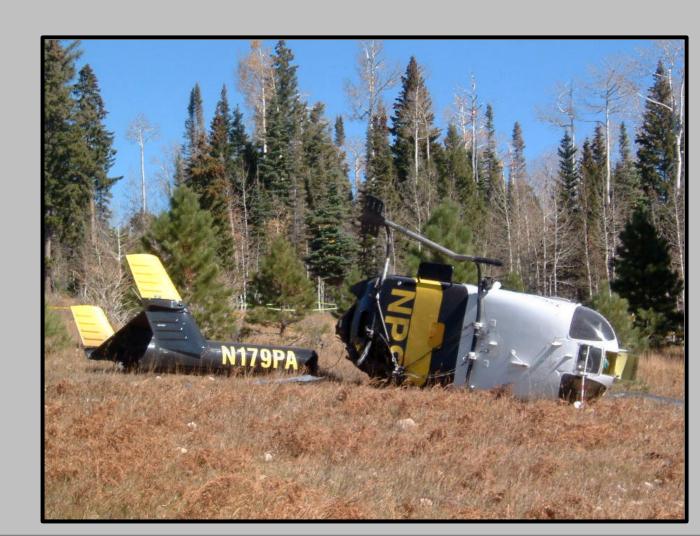
None

Procurement

Exclusive Use

NTSB I D

LAX04TA017





Fredonia, AZ October 16, 2003

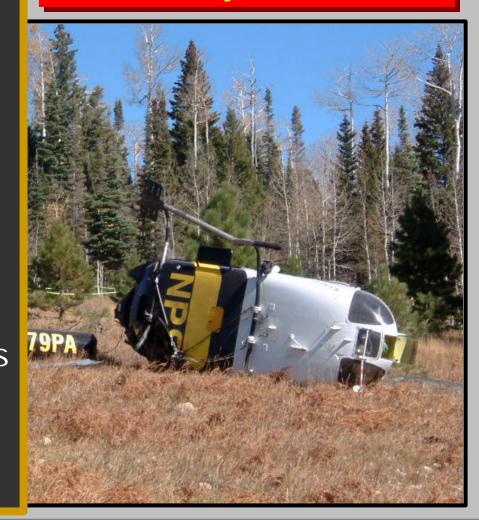
During approach to a helispot at approximately 40 feet above ground level and 10 knots the aircraft began a sudden uncommanded right yaw.

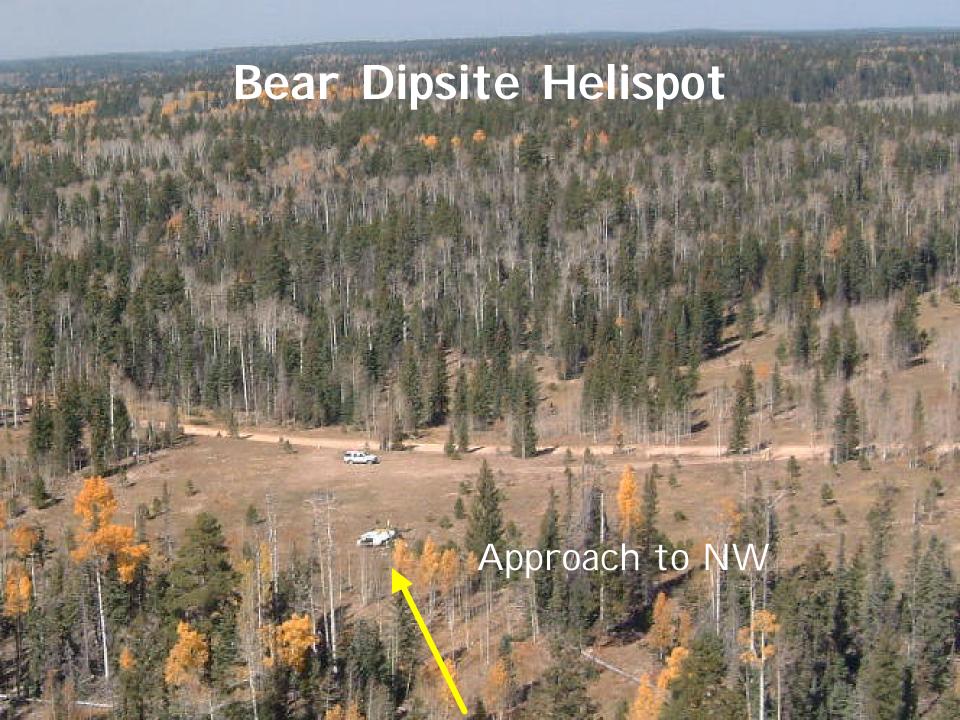
The pilot reported the pedals feeling unresponsive, as if they were disconnected.

The aircraft made several revolutions and impacted on its skids before coming to rest on its left side.

There were no injuries.

NTSB Investigation On-Going Preliminary Information



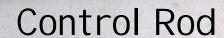


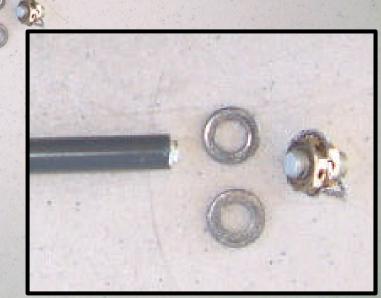


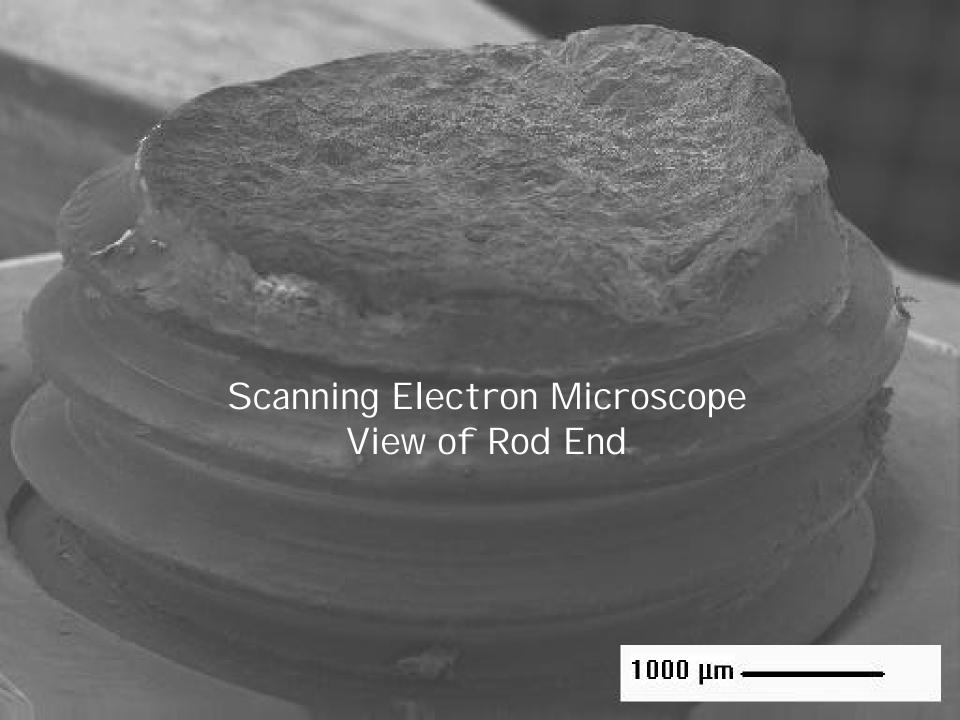
Fan Input Force Limiting Control Rod



Spring Capsule











OAS Observations Fredonia AZ, October 16, 2003

Risk Management strengths



ssue

- Exceptional pilot skills
- Excellent crew coordination
- Outstanding post-accident response by Grand Canyon National Park
 - Care for personnel
 - ✓ Notification
 - ✓ Security
 - ✓ Senior Leader involvement



Safford, AZ March 16, 2004

PZL M-18 (Dromader)

Mission

Aerial Fire Suppression Training

Damage

Destroyed

Injuries

1 Fatal

Procurement

N/A

NTSB I D

LAX04TA161





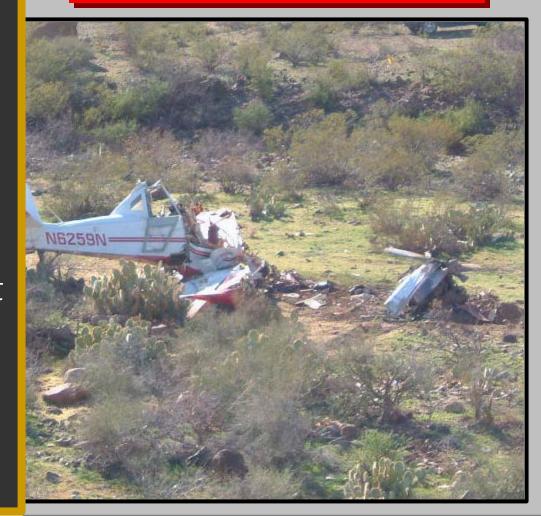
Safford, AZ March 16, 2004

On the base leg to a simulated fire, witnesses heard the engine "surge" 2-3 times and observed the aircraft in an unusual attitude with its "right wing high and its nose low."

The evidence at the site indicates that the aircraft impacted the ground in a nearly vertical attitude.

The aircraft was destroyed and the pilot received fatal injuries.

NTSB Investigation On-Going Preliminary Information

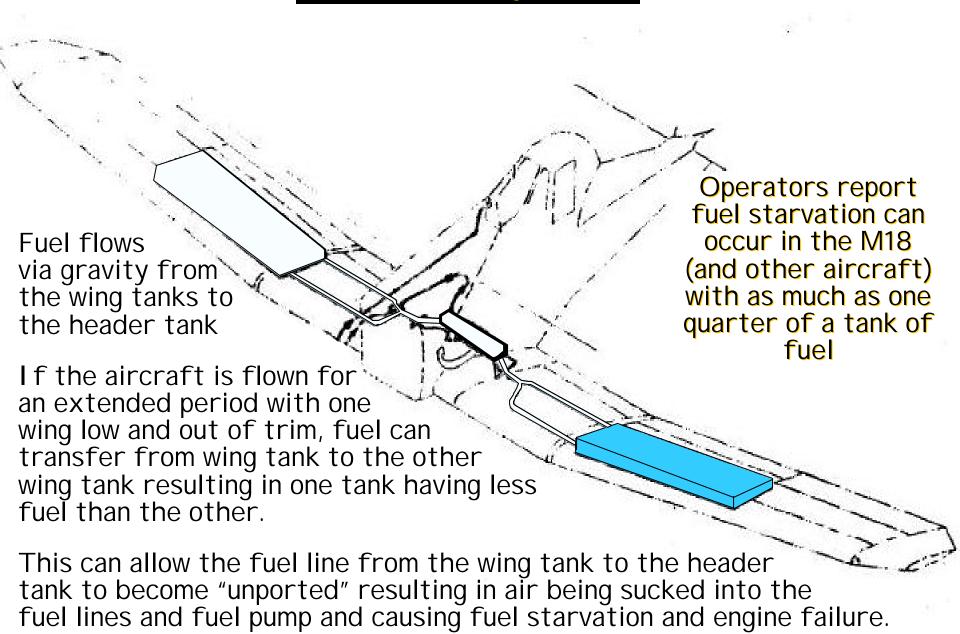








M-18 Fuel System





OAS Observations Safford, AZ, March 16, 2004

Risk Management weaknesses



ssues

- Compliance with Aircraft Manual limitations and procedures
 - ✓ Engine failure / re-start
 - ✓ Fuel mgmt procedures
- Stall training / practice
- Increase SEAT contract minimum experience requirement (5 hours in aircraft make and model)



St. George, UT June 17, 2004

PZL M-18A (Dromader)

Mission

Aerial Fire Suppression

Damage

Destroyed

Injuries

1 Fatal

Procurement

N/A

NTSB I D

LAX04GA243





St. George, UT June 17, 2004

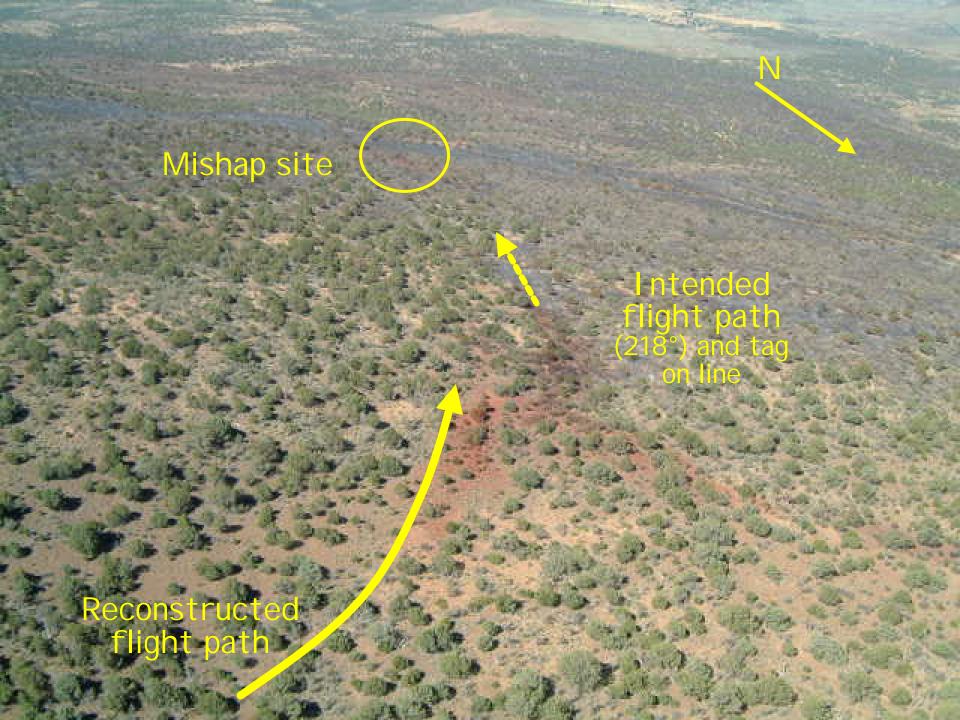
During a fire retardant mission the pilot was observed to make an early drop followed by the aircraft's nose pitching down approximately 45°.

The aircraft impacted the ground in a nearly vertical attitude and exploded.

The aircraft was destroyed and the pilot received fatal injuries.

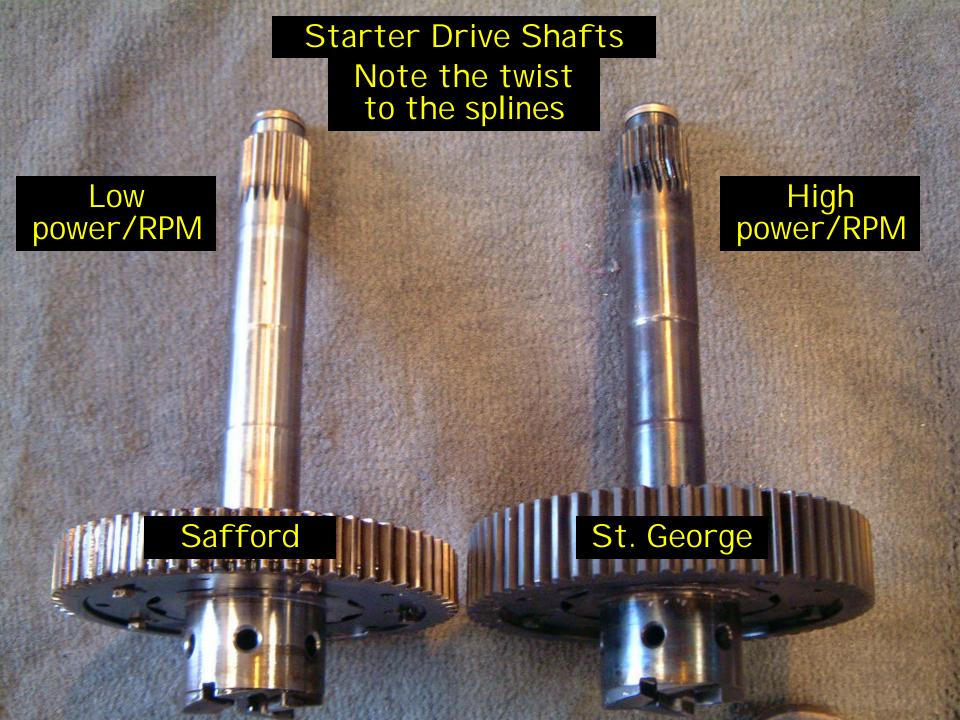
NTSB Investigation On-Going Preliminary Information











Airspeed Limits for SEAT Operations

For Operations Above 9,260 lbs. MGTOW

Max. Cruising Speed, V_{NO}

Max. Never-Exceed Speed, V_{NE}

Stall Speed / no Flaps

Min. Operating Speed

Max. Drop Speed

Max. MGTOW (with D98.670.00.1 spreader) 10,560 lbs.

Max. MGTOW (with other equipment)

Max. Landing Weight

Max. Bank Angle @ MGTOW

120 mph IA

140 mph IAS

93 mph IAS

106 mph IAS

112 mph IAS

11,700 lbs.

9,260 lbs.

30°

" PULL FOR CABIN AIR "



OAS Observations St. George, UT, June 17, 2004

Risk Management strengths



ssues

- Involvement of National SEAT Program Manager
 - ✓ Standdown of M18 fleet
 - ✓ Recommendation for pilots to review aircraft-specific drop airspeeds



OAS Observations St. George, UT, June 17, 2004

Risk Management weaknesses



ssues

- Stall training / practice
- Proper use of ALSE
- Standardized flight procedures
- Compliance with Aircraft Manual limitations and procedures
 - ✓ Minimum operating airspeeds



Pine Ridge, SD July 11, 2004

PZL M-18T Turbine Dromader

Mission

Fire Suppression

Damage

Substantial

Injuries

None

Procurement

Call When Needed

NTSB I D

CHI 04TA193





Pine Ridge, SD July 11, 2004

While preparing to enter the traffic pattern for landing, the pilot noticed the N2 (prop RPM) overspeed light illuminate.

The pilot tried, but was unable, to maintain prop RPM without the engine overspeeding.

The pilot reduced power to control the engine RPM and made an off-airport landing.

The pilot was not injured.

NTSB Investigation On-Going Preliminary Information

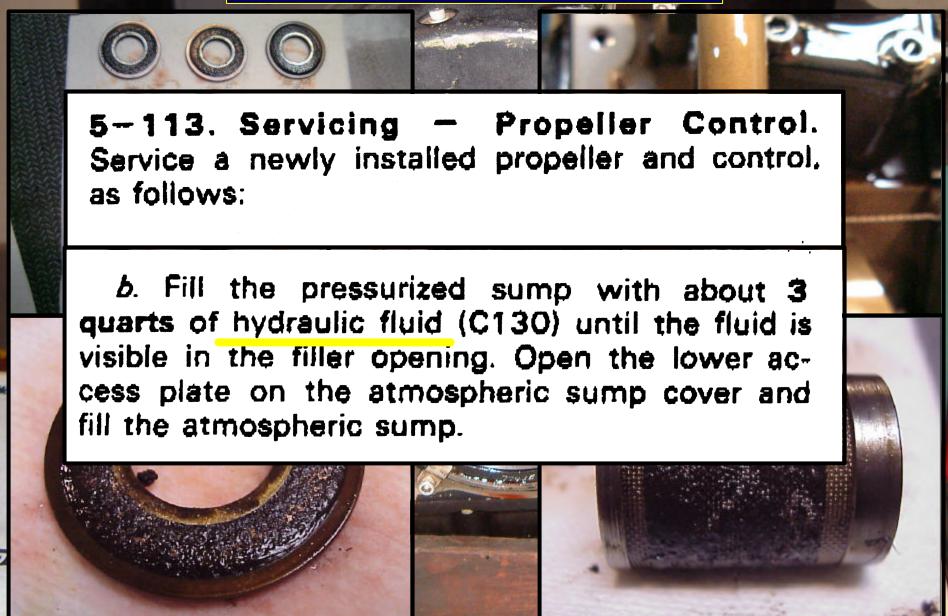




Gross contamination of filters led to prop lock









"...We get the oil from any automotive shop that has a quality 50-weight mineral oil..."

"...I t's a non-detergent -- any nondetergent oil..."

"I put about four ounces of detergent oil in it."

"...to my knowledge, there'd been no approval -- FAA approval to use the ...automotive engine oil."



NTSB Probable Cause Yakutat, AK, July, 2004



The National Transportation Safety Board

The National Transportation Safety Board determined that the probable cause of this accident was ...



Probable Cause

The propeller went to an overspeed condition as a result of contamination of the propeller control unit due to improper servicing by the operator and the mechanic.

A factor was the hilly terrain.



OAS Observations Pine Ridge, SD, July 11, 2004

Risk Management weaknesses



ssues

- Willful violation of standard
- Use of a non-approved lubricant
- Mixing types of lubricants



Yakutat, AK July, 2004

Cessna 206

Mission

Passenger and cargo transport

Damage

Substantial

Injuries

N/A

Procurement

Fleet

NTSB I D

ANC04LA099





Yakutat, AK July, 2004

During the takeoff roll the aft cargo door opened and slammed into the fuselage.

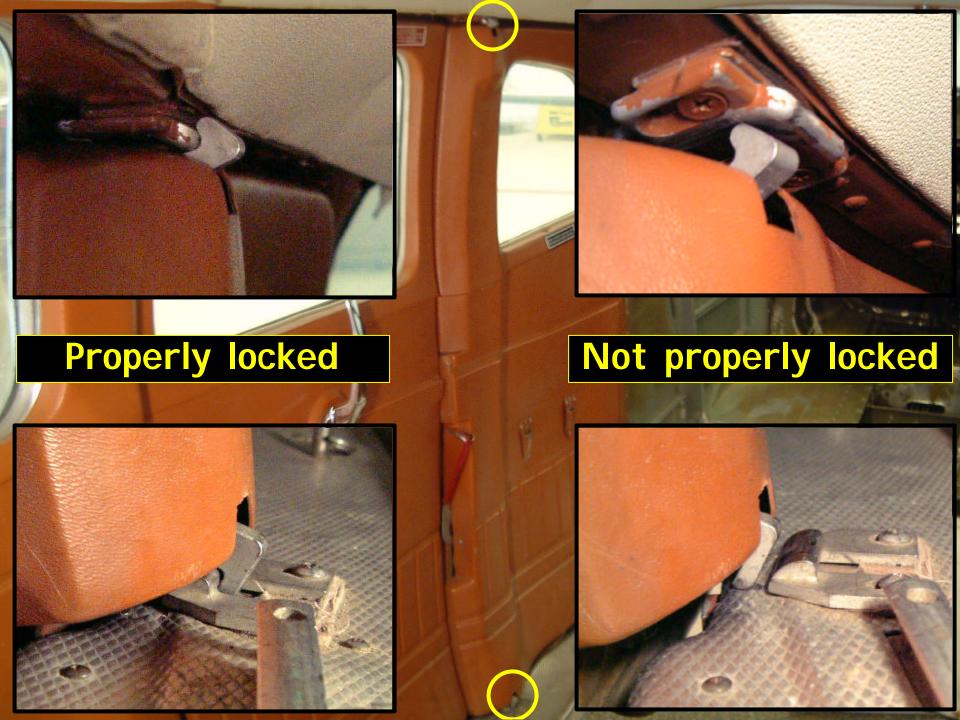
The pilot aborted the takeoff, inspected the door for damage, and then resumed the flight.

The aircraft was flown several more times before the damage was reported via SAFECOM.

There were no injuries.











NTSB Probable Cause Yakutat, AK, July, 2004



The National Transportation Safety Board

The National Transportation Safety Board determined that the probable cause of this accident was ...



Probable Cause

- The pilot's inadequate preflight inspection, and his failure to secure the cargo door, which resulted in the cargo door coming open during the takeoff roll.



OAS Observations Yakutat, AK, July, 2004

Issue

Risk Management weaknesses



Discussion

- Complacency during preflight
- Timeliness reporting aircraft damage
- Failure to file SAFECOM



Aviation Accident Review







